

THE ZOOLOGIST

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SOME MISCELLANEOUS NOTES FROM GREAT YARMOUTH (1915-16).

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My Note-books covering the past twelve months present a leaner series of entries than has been the case for many years past. Breydon, and the marshlands surrounding here, offered neither the normal variety of even familiar species, nor any, save in a few instances, remarkable by their numbers. Something, I suspect, must be placed to the universal unrest and disturbance over broader areas than my own; besides, the military restrictions have closed to such as myself large tracts of old-time rambling haunts. As it happened, when wandering on the Denes during the Easter East Coast bombardment, I was within an ace of being arrested as "a suspicious person" by a stolid old sergeant of artillery, who required much information to even half satisfy himself; and on another occasion, when out ditch-hunting with a member of the Microscopical Society, our basket of pickle-bottles and sundry was overhauled by a much-amused sergeant and sentry. To an occasional sentry command, "You musn't go that way, guv'nor!" one has become quite resigned: my binoculars have become such a source of interest to vigilant guards that I find it best now to make the least possible display of them.

Only a few items on matters ornithological presented themselves as more than common-place: they are the "off and on"

appearances of a varying number of Crossbills, in a small fir-wood with which I am familiar ; the rather more, I think, than usual number of Swallows ; the low disproportionate numbers of young birds to their elders (I refer more particularly to certain Gulls) that returned to Breydon flats after the nuptial season,* and the ill-luck of those persons who put hens upon seats of eggs—to this I shall refer later on. Complaints have been made about the number of Wood-Pigeons ; this year's augmented increase may be due, in a measure, to the absence of the many keepers and under-keepers called up by the military authorities, a process that may account for my easily observing a Sparrowhawk in a locality that is ordinarily most strictly "preserved." Jays, too, would to an extent be benefited by the absence of their natural and hereditary enemies who shoulder fowling-pieces ; whilst undoubtedly the game-birds, from the self-same causes, are notoriously less in numbers. As for Rabbits—I have seen fewer on my diurnal perambulations in quarters noted for them : maybe the presence of such numbers of soldiery has taught them to confine their gambols and browsing to the darker hours ; mayhap, too, the same arrangement that roped in the keepers arrested the poachers, who are not insensible to the delights of camping in wild Nature's haunts (!).

It has been somewhat curious to note the effects of loud explosions on the birds. In some instances the most timid of *aves* have got quite to ignore them, whereas others have been ousted by these loud reports, and the unrest of much military intrusion. The Breydon Gulls no longer worry about the passing of aeroplanes ; and I think, in a way, look for something to turn up from the boom of under-sea explosions.

The vegetation on and around Breydon has struck me as somewhat showing a process of changing. Rank rich grasses have afforded an abundant "haysel," and apparently smothered many other botanical species. Sow-thistles have been scarce on the "walls" where in some years they grow luxuriantly. The still hardening flats have, in places, produced a wider area of rank saline grasses, akin to those on the lessening "ronds," or saltings ; and the *Salicornia herbacea* has been remarkably

* On this point the Breydon watcher disagrees with me ; in July he thought their numbers greater than usual.



straggling and attenuated in its growth. A friend complained to me about the superabundance of water-lilies (*Nymphaea alba*) on some of the Broad's. The reeds by the Waveney-side have been enormously lengthy, and the small stinging insects that haunt them have been unduly vigorous and attentive, as one has at eventide sat fishing for eels for next morning's breakfast. Wasps up to late August had never been less in number, in my experience; half a dozen at most visited me in the "Moorhen," whereas in ordinary seasons they are fussing in and out all day long. Never before, I think, had the village children been so industrious, at the proper season, in destroying nests. Butterflies have not had a good time, and the hive-bees around have become almost exterminated by a fell disease; one friend, who usually reaps a goodly harvest of honey from a dozen hives, had in August (1916) but one accidental swarm (that voluntarily came to an empty hive), and even this, he told me, was then in a very bad way. All the other swarms had succumbed.

Considering the occasional quantities of waste petrol that float to Breydon, and that naturally must settle for a time on the mud-flats until blown on a larger tide to the sides, added to the sewage that escapes thither on the flood-tide, the types of crustaceans and vermes, etc., that live on and in the ooze, still exist in wonderful numbers, although the hardening of the flats in many places makes the mud too solid for even these low forms of life to continue. But at low water and half-tide it is most interesting to sprawl low in one's punt, and watch the tiny syphons of small clams moving in a curious manner, and the out-pushing of small nereids (*Nereis diversicolor*); to see the scuttlings to and fro of the shore-crabs that are scouting around for any *Crangon vulgaris* or *Palæmon varians* that may be rarely caught napping; and then to watch the curiously crawling *Corophium*. At such times one often has the "grup"-loving Greenshank not far away, busily scooping around in search of such crustaceans as he may find in the narrow and shallow gullies, loudly prating at each small surprise.

1915.

September 10th.—Saw a flock of over fifty Knots on Breydon. Many Wheatears of the year now drawing to the coast.

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September 15th.—A Landrail found its way into a cellar, where it was captured uninjured, being afterwards brought to me in a paper pastry-bag, to identify it. I think of all migrants this bird finds itself in the most curious of places.

Flocks upon flocks of Dunlins and Ringed Plovers (on this same date), with a number of Curlew-Sandpipers in their company, flying around the flats at high water; a number of Grey Plovers and Greenshanks also in evidence. So tame were many that as I rowed past them, and rattled my oars in the rowlocks, they merely lifted their heads and went on with their feeding. There had undoubtedly been many successive arrivals during the past few days (*vide* 'Zoologist,' October, 1915); also hundreds of Black-headed Gulls.

September 20th.—Young Wheatears all over the place; up to the present date the arrivals of Redstarts and other insectivorous birds from the north had been numerous observed.

September 24th.—A Pelican, undoubtedly a stray, was observed on the flats by a gunner named Wigg, who disturbed it, when it rose to a great height and flew away in a north-easterly direction.

ROOKS.—A flock, evidently very tired, came in on September 29th; wind N.N.W., and weather very squally, with heavy dark clouds.

October 1st.—A Green Woodpecker seen in St. George's Park, in the centre of the town. *Query:* Was it by any chance a migrant, or a wandering bird?

Same date.—*Corvines* coming over the North Sea in continuous small and straggling flocks. All seemingly tired out. Strongish northerly winds. *October 2nd.* Still arriving. Wind had veered round to the south.

October 2nd.—A flock of some dozen Godwits (*Limosa lapponica*) came to Breydon, just at closing-in time; they promptly descended from a high altitude on seeing the mud-flats. Grey Plovers still numerous, and attaching themselves to the flocks of smaller waders. Curlew-Sandpipers have been fairly numerous on the beach, a not by any means favourite resort of this species locally.

RABBITS.—Remarkably scarce just now (October 2nd), possibly owing to the over-abundant rainfall, as well as the lack of importations from the Continent. I gave one shilling and

eightpence for a threequarter-grown animal, for which, in normal times, I should have hesitated to tender a shilling.

The first week in October saw a heavy immigration of birds of various species: the night of the 4th was particularly a busy one; on the 5th Mr. Woods, the park-keeper, assured me he had that day seen three Grey Shrikes. One chased and captured a Sparrow, which protested noisily. He went to the rescue, making the Shrike drop it, when the smaller bird took the opportunity to fly away, but to no purpose, for the watchful "butcher-bird" was still on the alert, and in a twinkling had recaptured it, and flew away with it, this time making a meal of it. I have before observed that the Grey Shrike invariably arrives hungry. Two Short-eared Owls came to the Park, with many Gold-crested Wrens, Blackbirds, Redwings, Thrushes, Redbreasts. They remained a few hours, and passed on.

I have a record on the 7th that a heavy immigration of Woodcocks had taken place. One, flying against a telegraph-wire on the Quay, cut its throat, and fell dead, on the night of the 3rd. I was tempted to take a stroll along by the railway line to Caister, which runs parallel with the coast, but was rewarded only by picking up a dead Meadow Pipit beneath the wires. We had (as I had expected) a very scant list of fatalities during those night movements, the town lights being altogether suppressed after sundown; the birds flew in at a higher altitude than in normal times, when the glow of the lights on misty, darkish nights allures them to a lower plane of flight, some even to the level of the wires. I have—in years gone by—filled my pockets with chest-broken, throat-cut, and in some cases decapitated Larks, Blackbirds, and Thrushes, consoling my conscience at dinner-time by the thought that I had had no hand in their killing.

October 10th.—About a score of Swallows still to be seen at St. Olaves, flying up and down the cutting wherein lies the houseboat "Moorhen."

Quite two acres of Gulls on the mud-flats to-day (*October 16th*) Hundreds of Greater Black-backed and hundreds of Black-headed. A wretched Common Gull with petrol-blackened throat and breast disconsolately sat on the edge of the crow of himself and ignored by them. Grey Plovers abundant.

Same date.—A Kingfisher had captured a "whitebait" (young herring) that he found resisted all his efforts to swallow. He sat perched on the handrail against my smaller Noah's Ark, and dropped it below in the grass. I found it was $3\frac{1}{4}$ in. long. A flock of migrant Larks came over at three in the afternoon.

October 18th.—Saw several dead Redwings on the beach, evidently birds that had been drowned on the night of the 16th. On this date I went for my annual mid-migration walk by the East Coast railway; not a dead bird lay beneath the wires. On the 21st I "did" that part of the south beach not prohibited by the military and naval authorities, finding not a single stranded migrant, only a petrol-bedraggled Guillemot.

October 21st.—Found on the south beach fragments of two or three small birds; a dead Rook and Hooded Crow; and a Red-throated Diver, as sticky with petrol as if treaced.

Larks and Redwings arriving freely on October 22nd, and Rooks on the 23rd.

October 25th.—The following carcasses lying at the tide-mark: Dabchick, two Black-backed Gulls, Red-throated Diver, Guillemot, Razorbill, Puffin, Turtle-Dove, Hooded Crow.

Saw a Scoter (probably a pricked bird) sitting on the sand at the edge of the sea; on seeing me it flew out in a half-circle, and again alighted, waddled along most awkwardly, and again squatted, until I wearied of watching it. By the telegraph wires beside the railway I found a dead Pipit and two Starlings, one of which had cut off a wing completely by the force of impact, the severed member lying some inches away from the body. The other Starling had struck the side of the head, chafing the feathers off, the skin showing contusions.

October 27th.—A friend informed me that he had seen on that date on Breydon seven Whooper Swans and thirty-seven Geese, probably Grey-Lags; several Wigeon. He also killed several Wigeon on the 29th.

Michaelmas Daisy.—The seeds of this plant are a favourite morsel with many birds. On October 30th I observed Grey Linnets and Skylarks busy on a rond devouring them; I saw some domestic Ducks the previous week busy at the same occupation, dipping their bills in the water with every billful.

On *October 30th* I observed a Buzzard being badly bullied by

Gulls over the marshes; they were pursuing and tormenting him, chasing him from north to south, right to the marshes on the other side of Breydon. Two Hooded Crows joined in the squabble. It was funny to see two Gulls now and then apparently disputing among themselves in the combined chase. I had been told of a Buzzard having been seen treated in a similar fashion during the previous week—probably the same individual.

Same date.—Grey Plovers numerous on Breydon. Quite 3000 Black-backed Gulls, and hundreds of Black-headed Gulls on the flats. Many small waders. Wind easterly.

November 1st.—A few Starlings washed up on the beach, and much *Fucus nodosus*. A Woodcock was found dead, having hung itself in some wire-netting.

BAR-TAILED GODWIT.—A Godwit was brought me alive from Breydon early in September, having been shot high in the thigh, the bone being broken, and the leg hanging helpless. I could not splinter the break, so turned it into an aviary, with a handful of straw up in one corner, on which it lay for some days, without attempting to get about, although occasionally raising itself on its wing-tips. I fed it on worms; these it ate readily, and in two or three days I had tempted it to eat Spratt's chicken meal made slightly moist; snips of meat were picked out of it readily. Grubs it would not touch, nor maggots, but wood-lice were acceptable but taken daintily. In the second week it lifted itself on one leg, and hopped around, with the other limb swollen and the toes clenched. It soon limped on the rounded foot, and sat up in its corner less. By the third week in October the bone had become spliced, for the bird could then bend its limb at the "knee," whilst two toes had come out straight and pliant, the other toe still remaining obstinate. By another week the refractory toe had surrendered, and the bird walked comfortably enough. "Dick" would greet my coming with a sharp "*swe-dick!*" and chortle in a low key when he saw his saucer of meal or heard me digging for worms, soon becoming sufficiently confident to take them from my fingers. A lively worm would be passed between his mandible tips and nipped all the way along it, sometimes going through the process a third time before being swallowed, and then always head first.

"Dick" was very fond of a bath. I had hoped to keep the bird until the following migration season, when I should have released him, but he died on March 25th (1916).

Mr. G. F. D. Preston informed me, on November 6th, that he had observed flying up and down the north beach two Little Gulls (*Larus minutus*) on October 31st.

November 7th.—Saw forty Snow-Buntings.

Rooks coming over in weary, straggling flocks all the morning of November 10th; some made hard work of mounting above the chimney tops. Flying straight from east to west.

Twelve dingy-coloured Crossbills seen in a fir-wood four miles from the town, on November 11th.

November 12th.—Odd lots of eleven, three, and two Swans seen on Breydon, the weather at the time being exceedingly still, but the glass standing extremely low. Wind north. They had come no doubt "before a cold blow," or to escape one. Weather had of late been very unsettled.

Storm-Petrel brought in from sea alive on a Scotch fishing drifter, on November 13th.

November 16th.—Wild N.N.W. weather. The frost of the 13th–15th drove the Lapwings from the uplands to the lower and more saline marshes nearer town, where they are scattered all over the place. Some Snipe about; and on the mud-flats numerous Grey Plovers. The Gulls are having a bad time of it, herrings being very scarce, whilst not even a broken one is wasted.

Two Gulls flying across the Bridge from opposite directions on the 24th, at a very quick speed, very nearly collided above my head, which they would have done had not one lowered its left wing, on the instant, and the other also raised its left. Onlookers considered it "a close shave."

WILD RABBITS.—Some little larger than rats, fetching absurd prices in the market, on the 27th November. They ran from one shilling apiece to two shillings, and were rapidly enough cleared out at that price. The country folk lay the scarcity to bad weather during the breeding season, and the inflated prices *not* to their own cupidity.

A few Golden Plovers and a flock of Lapwings came in on November 28th from due east; and Rooks were passing over at

a high altitude on December 2nd, flying east to west. Snipe plentiful. A gentleman who hires a private Broad informed me, on December 2nd, that on his water he had quite 1000 Teal, a very interesting piece of information seeing that their numbers for some years had seemed greatly on the decrease.

December 19th.—Curlews plentiful on Breydon. On December 18th I obtained a Mallard in the market. It had the head normally coloured, with a somewhat elongated beak; no white neck-ring, and no colour on the chest. Below, it was of a dirty grey, with freckled markings after the pattern of a Pochard. I sent it to Mr. J. H. Gurney, who submitted it to Dr. Ticehurst. It was thought to be some sort of hybrid.

1916.

January 3rd.—Walked across the marshes to the Breydon houseboat. Saw a large flock—some hundreds—of Dunlins.

Quite a notable inrush of mixed Snipe during the last days of the old year and the beginning of this month. A lad on the marshes shot nine Jack Snipe in a very short time, a goodly criterion of their abundance. My friend Brooks on the Belton marshes shot a Common Snipe: as it fell quite 400 got up out of a fenny corner. Using a single-barrel gun, he was naturally chagrined at the incident.

January 8th.—Several Jays and some Green Woodpeckers in a small wood hitherto rigidly preserved.

January 13th.—A somewhat disconcerting flood around Yarmouth, when the tide slithered over the banks of Breydon, breaking gaps in two or three places. Not to mention the flooding of some of the lower quarters of the town, the marshes were soon two or three feet under water: the salts joining ditch to ditch "turned up" no end of roach and small pike, which lay on the marshes when the waters subsided, to the great joy of the long-suffering Gulls and the Hooded Crows. Myriads of drowned worms afforded the Black-headed Gulls a welcome banquet, and a badly-needed one.

January 16th.—Nine Swans flew over the "Moorhen" at St. Olaves at 6 a.m. One could have hit a bird with a stone. About 100 Geese passed over my house at Yarmouth on the

24th. A flock of sixty Geese that passed over the "Moorhen" on the 23rd flew in wedge-form, a single bird leading. Whilst still flying north-east, the first five or six dropped out, fell back, and others pushed forward to replace them, the tired ones dropping into position and still keeping that triangular form.

Mistle-Thrushes plentiful in the neighbourhood, one piping daily, third week in January, on a tall tree-top in the centre of the town. Two cocks fighting lustily in St. George's Park on February 1st.

February 26th.—From 250 to 300 Wigeon on Breydon, in one flock, passing over to sea, on being disturbed, in a fan-shaped flock. Considerable muster of Knots, with some Ringed Plovers and Redshanks.

Coots are realising good prices in the market, readily selling at eightpence and ninepence each. Wild Ducks selling at half-a-crown each. Fourpence was the old regulation price for Breydon-shot Coots in the days of yore.

Two Snow-Buntings on the beach as late as March 26th.

March 30th.—A dozen Geese, presumably Grey-Lags, on Breydon. Saw a Black Redstart, same date, hunting on some rails near my Breydon Noah's Ark.

Several Sheld-Ducks, and about 200 Wigeon on Breydon, April 1st.

Entry for April 2nd.—"Last week a 'large Hawk' seen by Mr. Brooks, at Belton, chasing a Wild Goose on the marshes, when the quarry came within a few feet of a gunner, who fired at it. Being so close he missed the bird, and distracted the 'Hawk,' which was without doubt a Peregrine Falcon."

Snipe numerous on the Suffolk lowlands. Put up several from a rond on April 2nd, at St. Olaves; find they are all over Herringfleet, and parts of the Belton Marshes, and "drumming."

My friend Mr. H. E. Hurrell informs me that when cycling near Hopton on April 1st he heard the call of the Cuckoo.

The Rooks' nests in the trees overlooking the Market-place now number some twenty; those in the churchyard trees number thirteen.

April 15th.—Saw a Sabine's Gull on Breydon, being attracted to it by its Tern-like flight. The back was darkish-grey, head perfect, and tail distinctly forked. Wind boisterous and cold.

April 26th.—About sixty Knots in one bunch on Breydon. Every one as grey as in mid-winter; undoubtedly birds of last year's hatch. I noticed that the Godwit—confidingly tame—not infrequently wrings and pushes his mandibles so deeply into the ooze as to mud his forehead.

Saw a nice muster of Shovellers on the Broads in the vicinity of Catfield on April 27th. Got to within forty yards of a couple who were watching my movements in turn. Brimstone butterflies very numerous.

May 8th.—Unpleasant morning; saw two Swifts.

May 11th.—On Breydon observed two Sheld-Ducks, an Oyster-catcher, and many Whimbrel.

May 12th.—Saw eleven Lesser Black-backed Gulls, all in one flock by themselves on the flats; six were adults—"like pictures"; two were third-year birds, and three were last year's birds. Many Little Terns, in pairs, on Breydon.

Two Spoonbills had been frequenting Breydon, off or on, week ending May 19th.

May 23rd.—Spent a rather weird night on Breydon. Caught about sixty eels (captured 108 night before), the stillness of the night being punctuated by the croak of a restless Heron, and the sharp, clicking "*wick-wick!*" of the Godwit, and then seeing at intervals a searchlight stabbing the dark skies with unexpected suddenness.

May 24th.—Observed a Little Tern twice or thrice poising itself easily in the air, putting a stray wet feather in its place when on the wing, with its beak almost parallel to its body.

Heard the Whimbrel on Breydon as late as May 24th. Next day I observed Rooks, young and old together, propping on the mud-flats. A half-score Curlews still there.

A considerable flock of Common Gulls on Breydon on June 26th, mostly adults. This species is the slowest and least demonstrative of the family that haunt the mud-flats, spending a good deal of its time preening its feathers, and in sleep.

June 29th.—On the borderland of my beat there is a little fir-wood, backed by an undulating heath bright with heather and rich with the green of the bracken, fore-fronted by a strip of fenny land, from which it is divided by a long ditch beloved

of Kingfishers, and on occasion Wild Mallard and Duck, tempted thither by a flock of my friend the gardener's tamed pinioned wild-fowl. On this date that bit of fen is gay with ragged robin, "cotton-plants," forget-me-nots, and the dwarf yellow rattle. The wood covers some six acres, and trends, in the westward, down to the marshes. It is lively with birds; during the week four Hawfinches—probably nesting in some obscure corner—have been flying around; numbers of Goldfinches and some Bullfinches, with two or three pairs of Red-backed Shrikes, haunt the place; to these may be added seven or eight Crossbills in green and red, a half-dozen Jays, and plenty of Nightjars. This evening as I stood revelling in the spot, I heard the soothing croon of Turtle-Doves, their soft mournful cooing creating at length almost a feeling of monotony. A number of alders share with the firs this delightful area, whilst a bordering of oaks shuts in the far side. I seldom pass that way but I spend a short pleasant while in their shadows. This unnamed place is now a little paradise: and I hope the energetic keeper has gone to the war.

June 30th.—I am of opinion that the Swallows and House-Martins have been more plentiful than usual hereabouts; Sand-Martins much scarcer, and Swifts and Nightjars well up to the average. Two pairs of Bearded Tits appear to have lived this summer in a Waveney reed-marsh.

Three Herons, over from Holland for a short spell, flew in on July 13th, going direct west at 8 a.m. Lowering as they came in, they were set upon and mobbed by a number of Gulls.

On the night of July 13th I sat eel-fishing beside a reed-bed on the Waveney; at 10 p.m., in the dusk, an Owl flitted across the reeds, disturbing a Sedge-Warbler, that darted after the bird of prey with much noisiness and a great show of anger, pursuing it out of sight and hearing.

SPOONBILLS.—When sailing my punt on Breydon I put up a Spoonbill that had been standing belly-deep in water at the edge of the Ship Drain. The bird's breast was richly saffron-coloured, and the crest of fairly good dimensions. Three were here during the second week of July.

There had been for several days a Scoter frequenting Breydon, where it was to be seen diving, and coming again to the surface

holding a kicking shore-crab (*Carcinus mœnas*) in its bill, which it promptly smashed up and devoured.

July 21st.—Redshanks numerous on the mud-flats. At the end of July Sparrows were particularly attentive to spiders, after which they hunted around windows, gates, etc. A friend assured me that the Sparrows paid great attention to his garden peas, but he was emphatic they were after insects; another person noticed these attentions of the Sparrows, but condemned them as pea-pilferers.

Swallows just after sunset, in July, have a method, very like the Swifts, of rushing around in flocks, capturing what I take to be the gnats and mosquitoes among the reed-tops, just previous to retiring for the night.

There are apparently two black Water-Voles haunting my ditch.

On August 3rd I saw the forsaken nest of a Moorhen at the end of a ditch black with filthy scum, the receptacle of the drainage from a "cow-parr."* The young birds must have taken their early swims to the great detriment of their little jackets. It is odd that with the choice of many acres of clean reed-bed hard by, the parents should have selected such a situation; possibly the insects swarming there may have been the inducement.

The only Green Sandpiper I have heard this autumn passed over the "Moorhen" on August 6th.

About a score Crossbills at Belton on August 8th. Same date a Golden Plover passed overhead.

Hérons still visit the Fritton Woods. A friend when fishing observed a Heron alight, apparently in the water, on the margin of the lake. Knowing that the water is deep all round, he soon solved the enigma by discovering the bird had alighted on a submerged snag or bare tree-branch that had fallen into the water. From this post of vantage the Heron lay wait for giddy young rudd that toyed at the surface.

There is a small pig-sty, notorious for its ooze, in a village hard by, wherein the old sow wallows leg-deep. Above her equally obscene sleeping-room, not three feet from her, a pair of Swallows had built their nest, another apparent instance of avine disregard for a sweet and cleanly home.

* A "cow-parr" is Norfolk for a drainage corner of a cow enclosure, a low corner of a "cow-yard."

During a very dry spell in early August, several Common Snipe visited Breydon flats, an event that happens only when the dry marshlands are utterly unable to provide these birds with food.

August 24th.—Several Greenshanks in Breydon.

On close sultry days, as on August 24th, Starlings have a curious habit of copying the Swallows, by following some of their insect prey, and snapping them up on the wing overhead. This afternoon some species of insect, whether *Diptera* or *Coleoptera* I could not ascertain, had tempted them to sail round and round, now on parachutic outspread wing, now suddenly checking themselves and briskly hawking after one that had escaped. Their mandibles could be seen to snap at victims that one could not distinctly discern.

The hatching-season in my area would seem to have been a bad one, so many chicks dying in the egg. My neighbour the farmer at St. Olaves, who usually puts down twenty or thirty hens, lost whole clutches, or only had a few odd birds hatched off. I found similar complaints all round the neighbourhood, the general opinion being that the concussion in the air caused by falling bombs, and also a certain bombardment, which made the very houses vibrate a few miles inland, had not a little to do with the failure. I heard complaints in opposite quarters: I do not know if one may accept this suggestion. Jary, the Breydon watcher, assures me that very few young Terns have been seen on Breydon this early autumn, as is mostly the case, but he was emphatic on the point that young Black-headed Gulls had been very plentiful in the end of July.

August 26th.—The town Sparrows are all gone a-harvesting in the country; even my lot no longer come for Mrs. P.'s waste bread-pieces. This bird would seem to be exceedingly partial to the great dragon-fly, which it will pursue with some zest, and on capturing it deftly bites off the wings, and then devours the carcase. What insects the Sparrow will not eat would make a shorter list, I think, than that of those it delights in. There are times when spider hunts on sand-dunes, where ground hunting-species resort, are quite a paying recreation for these indefatigable little creatures.

BLACK-BACKED GULLS.—There is still a considerable sprinkling

of adult Greater Black-backs on Breydon. They are keen on carrion, fish-food having been none too plentiful with them. Yesterday Jary saw a big fellow perched on the putrid carcase of a big dog, eating heartily as this queer raft floated him along-stream. The other day there was a regular stand-up fight between two strong birds, beginning with a dispute over some stranded morsel. They went at it "hammer and tongs" with much noise and posturing, one at length seizing the other by the nape of the neck, holding on to him determinedly, feathers flying as they struggled. By the end of a quarter of an hour some others had come up and had started on the twain, separating them, afterwards pursuing the tentative victor all over the flats awing. These birds are keen on shore-crabs; the latter, when stranded on the flats by the fall of the tide, hide beneath the *Zostera* and the "cabbage-weed"; this, the Gulls, in extended order, toss over as they walk along the flat, finding, crushing and swallowing the crabs with some show of intelligence and success. A shrimper who had returned with his catch had occasion to go home with a hamper of sorted shrimps, leaving a big basket of the unsorted. In his absence the hungry Gulls had discovered them, and had swooped down upon the shrimp-boat, and by his return had devoured nearly all of them.

During the summer three Cormorants had spent much time on Breydon eel-catching. One bird brought to the surface one largish eel as big round as an egg-cup, when some Gulls set upon him. He immediately dived with it, the fish coiled round his mandibles, and presently came up again, having either swallowed it below-water or lost it.

My friend Mr. C. G. Doughty, now of Gorleston, sends me some interesting notes. When staying at Southwold last October, he, on the 4th, observed an immigrant Redbreast fly towards the pier, but fall into the sea before reaching it. After floating some minutes with outspread wings, it rose again and flew out seawards, and was lost to view, probably drowned in its bewilderment. Wind was north-east. A Sparrow-hawk, and what he believed to be an immature Black-Throated Diver, were found on the beach after a storm.

The following birds were picked up on the sands between Gorleston and Corton:—November 8th, a Coot; November 18th,

Common Scoters, a few days later, and on February 18th, April 8th, and one on a later date were found, four immature but in good condition, with nothing to account for their demise. One bird was an old male, very emaciated and faded in colour, suggesting old age. November 20th, Storm-Petrel; November 24th, Little Auk; Short-eared Owls seen on November 23rd, and later; December 5th, Bridled Guillemot found alive, but feathers on one side much clogged with petrol; January 3rd, Velvet Scoter; March 9th, a Puffin; March 29th, a dead Plover and a Starling, after the great blizzard.

March 18th.—Fine and warm, no wind. Large numbers of Rooks, with Jackdaws, observed at Yarmouth migrating, between 12 noon and 12.30. They flew in an apparently tired and purposeless manner, at no great speed. One flock of them appeared to dislike the venture, and turned back awhile.

March 21st and 22nd.—Strongish north-east wind. Several Larks', Starlings', *Turdidæ's* (probably Redwings') and Rooks' sternums, with wings attached, lying at the tide-mark, suggesting disaster on the outward voyage. March 25th, a dead Blackbird.

Sanderlings frequented the beach all winter, sometimes a single bird being seen, sometimes two or three, occasionally five, and once seven. They were first observed on November 10th, and vanished on May 4th. Ringed Plovers seen April 8th, and onwards.

A Stonechat seen on the Golf Links and Parade all the winter; two joined him on February 26th, when snow lay on the ground.

A few years since a condemned fishing-smack was towed a mile or so up Breydon, and stranded on a convenient spot near the walls to be broken up by a marsh farmer. All the upper parts and sides were removed, and the keelson and lower ribs left, these becoming in time coated with silt. Three years since the farmer's men threw out this accumulation of mud, and removed whatever else was negotiable. The long ridge of mud hardened; to-day the top stands above the level of spring-tides, and is a favourite resort of small waders when "washed off" the flats.

On August 31st I rowed, with my old blind chum Dye, up-stream on top the tide, when my attention was arrested by

quite a menagerie of waders, most of them asleep upon the ridge. I quanted to the edge of an adjacent rond, and lay for some time watching them, at intervals pushing nearer, until I was within twenty feet of the crowd. It was a bonnie sight! Twenty-five Knots, mostly greys, with here and there one with a fawnish-tinged breast; thirty Curlew-Sandpipers, some still ruddily-tinted below; half a hundred Dunlins, several of which had the black patch on the breast as perfect as in spring; and several Little Terns, the old ones flitting to and fro after young herrings that, up to three inches in length, they brought back with them, to be snatched by a hungry youngster whose appetite never for long seems to be appeased. Presently I pushed the boat's nose into the heap, when all the crowd took to wing, but as I lay prone and still on the forepeak, my chum crouching in the well of the punt to "listen," they flew in again and alighted, when I could have thrown the proverbial salt upon their tails. I found patches of rond-grass growing, with tufts of *Salicornia herbacea*, and a closely allied plant flourishing in sufficient abundance to make that mud-ridge picturesque. I am afraid that on the morrow a wily old hand-gunner of my acquaintance haunted that spot, as often aforetime he has, to the disturbance of my tame and unsophisticated little friends in autumn-tinted feathers that had piped to me, and showed me how they slept and gossipped, bathed, and hunted aggravating parasites. Why can't men let them alone to live their ways, as I do?

There was one small Sandpiper who gave me twenty minutes' hard puzzling; he was asleep, showing me only his stiff compactly-bunched back, and a suspicious tail-feather or two: but for the place and company I found him in, I should have declared him a Wood-Sandpiper. I still think that such was he; and an odd glimpse or so of his head and bill, as he readjusted his sleeping position, still further justified my supposition. There was, too, a pronounced call like "*Giff! Giff!*" as the crowd bunched in their hurried flight. You never know your luck on Breydon, and can mostly prepare yourself for surprises and for tantalisations.

ORNITHOLOGICAL REPORT FOR THE MALTESE
ISLANDS (JULY-DECEMBER, 1915).

By G. DESPOTT, M.B.O.U.,
Nat. Hist. Museum, Malta.

THE Maltese Islands, owing to their position almost in the very centre of the Mediterranean, and forming, as has often been stated, a stepping-stone between Europe and Africa, are surely to be considered an ideal point from which to make observations and issue a report on Bird-Migration. Several friends have promised to assist me in this work, and some have already given me many valuable notes for the compilation of the present report. Amongst these I may mention Mr. L. Cachia Zammit, Col. Francia, Mr. F. S. Gera, Prof. Vassallo, LL.D., Mr. A. Vassallo, P.A.A., and Mr. J. Zammit, P.L., to all of whom I must tender my heartfelt thanks.

During these six months the following were the most important occurrences :

(1) A Short-toed Eagle (*Circaëtus gallicus*), taken in the neighbourhood of Wardia in the first week of October ; this is the only living specimen I have seen taken in the island. There is a stuffed specimen in the Nat. Hist. Museum, and another was in the collection of the late taxidermist Mr. G. Micallef, which was shot in Comino about twelve years ago. Schembri says that this species, which is rather rare and does not occur

annually, usually appears during August and September. Wright says that a specimen in his collection was killed in Gozo at the end of August, 1857; this is perhaps the specimen which is preserved in our Museum.

(2) A young female Peregrine Falcon (*Falco peregrinus*) was shot in Wied il Buni by my friend Mr. L. Cachia Zammit, who was good enough to send it to me. This is the only specimen which I have seen in the flesh; I know, however, of other, stuffed, specimens which have been taken in Malta. According to Schembri, the species was rather common in the island during his time, and was also one of our breeding species. (The bird which bred here is very probably the *Falco peregrinus brookei*, which is the Mediterranean race.) Wright does not state its frequency here, but from his list it does not appear to have been very rare; certainly its rarity to-day is quite unquestionable, and so I have no hesitation in putting down the present occurrence as one of exceptional importance.

(3) An exceptional passage of Honey-Buzzards (*Pernis apivorus*) which have lately become rather scarce, occurred on September 15.

(4) A Short-toed Lark (*Calandrella brachydactyla*) was taken on December 2, an exceptionally late date for the occurrence of the species in Malta.

(5) The nesting of a pair of Spanish Sparrows (*Passer hispaniolensis*) late in November, a case perhaps unique.

(6) The Black Redstart (*Ruticilla titys*), which is a rather scarce visitor, was pretty common during this season.

(7) Late in December, amongst the Adriatic Gulls (*Larus melanocephalus*) taken, there were two ringed specimens marked M.K. Ornith. Közpout, Budapest, 5358, and M.K. Ornith. Közpout, Budapest, 5573.

JULY.

During the whole of this month the most common species were the Spanish Sparrow and Sardinian Warbler; next came the Spectacled Warbler and Short-toed Lark. Sparrows' nests continued to be rather common up to the middle of the month, and even during the last week of it I found a nest in which eggs were still being laid.

2nd.—The sky rather cloudy, with a fresh wind blowing from the W.N.W. I observed a flock of seven Curlew-Sandpipers flying along the western coast of Marsascirocco harbour.

6th.—A very light wind from the N.N.E. A Redshank passed to the north.

14th.—Wind S.S.E., almost calm. I observed an Osprey hovering high at a distance of about three miles off Delimara Pt. I was also told by some fishermen that the bird had been frequenting the same locality for at least a fortnight before.

20th.—A fresh wind from the N.W. Saw, for the first time in the season, a Kingfisher.

28th.—A light N.E. wind. I went to Filfola by the way of Wied-iz-Zurriek, whence I took a boat. On my way there I observed that the Petrels, which were pretty abundant, were flying in an easterly direction; in the afternoon they could be seen coming from the east. Some alighted on Filfola; several, however, continued on their way to the west, from which quarter a fresh wind was now blowing. On this occasion I found that there were very few Shearwaters on Filfola; some had young, others had fully-incubated eggs. The Petrels too had young and eggs. Besides these birds the only other species I saw were three Sardinian Warblers and one Subalpine Warbler; this had a nest containing four young almost ready to fly.

AUGUST.

2nd.—Almost calm, S.S.E. I went along the southern cliffs for a distance of seven or eight miles, where I observed eleven Blue Rock-Thrushes, some Rock-Pigeons, two Sardinian Warblers, and some Sparrows.

5th.—A fresh wind was blowing from the N.W. A Kingfisher was taken in Marsascirocco bay; this might have been the individual seen on the 20th ult.; at least a fisherman told me that he had seen the bird for two weeks.

7th.—A light north wind. Three Short-toed Larks came in from the sea; these I observed while I was in a boat off Binghisa Pt.

10th.—Almost calm, weathercocks pointing to the N.W. A pair of Kingfishers entered Marsascirocco Bay, seemingly to establish themselves on the fish-ponds.

18th.—Almost calm ; weathercocks still pointing in the same direction. A Curlew passed to the south early in the morning.

17th.—A very light N.N.W. wind. Flocks of Short-toed Larks continually coming in from the sea.

19th.—A light north-westerly wind. A Curlew passed against the wind early in the morning.

20th.—Almost calm, N.N.W. Many Grey-headed Wagtails (amongst which were some Short-toed Larks) came in from the east.

23rd.—A fresh wind blowing from the N.N.W. ; a little shower every now and then. During the morning several Short-toed Larks and Grey-headed Wagtails came in from the sea ; amongst them I observed several Black-headed Wagtails. In the afternoon I saw two Hoopoes, the first I observed during the season.

24th.—Wind moderate, a very light shower. Short-toed Larks and Wagtails continued coming in from the sea. I observed that while the Wagtails alighted, the Larks continued their way against the wind. Five Swallows came in during the day.

25th.—A slight shower. Several Swallows and one or two House-Martins.

26th.—Wind blowing moderately from the N.W. A Curlew passed in the morning to the S.W. Wheatears were observed arriving during the afternoon.

27th.—The wind blew somewhat lighter from the same direction. Several flocks of Curlews, composed of from three to seven individuals, passed to the south. Along the barren rocks of Bingham there seemed to be quite an inrush of Wheatears.

28th.—A perfect calm. Of the Wheatears seen yesterday not one could be observed to-day ; a Sparrow-Hawk was seen passing to the S.E. (I was told that many Wheatears were exposed for sale at the Valletta Market.)

29th.—A very light wind blowing from the S.S.E. In the clear moonlight I could observe distinctly several Ringed Plovers running over the sand at Birzebbugia, and continually picking up something ; they were probably feeding on the Sand-hoppers and other small crustaceans so common on that sandy beach.

30th.—The wind continued to be very light, blowing, how-

ever, from the W.S.W. Small flocks of Wagtails came in from the sea during the whole day.

31st.—A light wind from the N.N.W. A Common Tern came over from the S.E.

SEPTEMBER.

2nd.—Almost calm ; weathercocks pointing to the E.N.E. some Quails were taken during the morning.

3rd.—Wind very light, blowing from the S.E. Quails were taken in rather large numbers. I observed a Hoopoe and several Dotterels, these passing to the S.W.

5th.—A moderate N.N.W. wind. Wagtails and Short-toed Larks passed to the S.W.; several Turtle-Doves passed also in the same direction. A Curlew was seen in the afternoon passing over to the west. About an hour before sunset a Woodchat came in from the sea ; it was shot by a so-called sportsman directly it alighted on a branch of a carob-tree at the mouth of Wied il Buni.

6th.—Almost calm, weathercocks pointing to the N.N.W. A good number of Wagtails came over from the east, while the Short-toed Larks were observed going out in the opposite direction. During the day there appeared a very sensible diminution of Sparrows, which up to this date could be seen, relatively abundantly, on the roofs of farmhouses.

7th.—A light N.W. wind. Wagtails and several Curlews passed over to the west.

8th.—Wind blowing moderately from the east. Flocks of Turtle-Doves came in with the wind ; of these several were taken during the morning. Curlews passed, very high, in a westerly direction, probably without alighting. Seventeen Cranes were seen on the barren rocks at Binghisa, and one of them was killed ; towards sunset five Purple Herons came over from the north ; they hovered for nearly an hour over Wied il Buni, where they at last alighted ; before dawn they all flew towards the south.

9th.—The wind changed to a very light E.S.E. Twenty Turtle-Doves passed over to the south ; seven Herons passed in the same direction ; two Curlews were seen towards sunset passing over from the S.W.

10th.—Almost calm, weathercocks pointing to the S.E. Only

some Turtle-Doves and Wagtails; the majority of these were taken in the clap-nets.

11th.—A perfect calm, so much so that I could not mark the direction of the wind; the birds seen consisted of some Quails, several Dotterels, Wagtails, and Terns. Many Wagtails were taken, especially towards noon. I noted two Curlews passing over to the S.W. and two Hoopoes, which came in from the east. During the afternoon, passing through Wied Zembak, I flushed three Nightjars and one Purple Heron. We had a shower to-day.

12th.—A light wind from the N.N.W. Only some Wagtails and Quails; to-day also we had a very small shower.

13th.—Wind continued from the same direction, but blowing moderately; two Redshanks came over with the wind. Heard the shrill note of the Wryneck.

14th.—The same wind. Many Wagtails came in, amongst which great havoc was wrought both by fowlers and the so-called sportsmen. One of these killed thirty-four of them in a single shot, from the canes at the bottom of Wied Zembak (Wagtails and Starlings seem to be particularly attracted to the canes in this locality).

15th.—A perfect calm. Buzzards passed in fairly good numbers all the day long, but towards the evening especially. Some were also taken; I procured one specimen, which I stuffed.

16th.—Almost calm; only a few Wagtails.

20th.—Perfect calm; two Skylarks, apparently the first arrivals.

24th.—A light wind blew from the east. I observed a few Skylarks, amongst which there were also a few Calandra Larks.

25th.—Wind blowing moderately from the E.S.E. A Woodcock was shot at Wied il Koton; this seems to be an exceptionally early date for the occurrence of the Woodcock in Malta.

28th.—A fresh wind from the N.N.W.; a solitary Starling came in from the sea.

29th.—A light wind from the N.W. A few Skylarks and some Finches; also some Titlarks and a few Tawny Pipits.

OCTOBER.

4th.—A perfect calm. Greenfinches arrived in fairly good numbers, so many, in fact, that netters began to look forward to

a plentiful passage of Finches. (As we shall see further on, however, their expectations were not realised.)

6th.—Almost calm. Weathercocks pointing to the N.N.E. A flock of eleven Chaffinches came over from the S.W. Six of them were taken by a netter in Binghisa.

7th.—A light wind from the N.W.; two male Chaffinches taken. These were the only ones seen.

10th.—A moderate wind from the S.W. A few Greenfinches; some taken.

12th.—A moderate wind from the east. I saw the Robin for the first time during this season.

14th.—Wind continued blowing from the same direction, but very mildly. Redstarts, Nightingales, and several species of Warblers, which generally visit us during the last week of September, were only noticed to-day; and in spite of an Act protecting them, many were taken and very probably exposed for sale in the Valletta Market.

16th.—The same wind blowing moderately. Stonechats, Titlarks, and Tawny Pipits.

18th.—The wind, blowing very mildly, turned to the S.E. Several flocks of Starlings passed over towards sunset in a northerly direction.

19th.—The wind changed into a fresh N.W. Two Sparrow-Hawks were observed passing over to the S.W.

20th.—Wind the same both in force and direction. Larks came in from the sea in fairly good numbers. A Siskin was taken at Zurrico.

23rd.—A very light wind from the N.W. I saw a Hawfinch and some Tawny Pipits.

25th.—A fresh wind blew from the E.S.E. till 2 p.m., when it changed to a S.W. Sky cloudy. Large flocks of Larks began to arrive in the afternoon. These continued to increase both in number and frequency towards sunset. During the night the fields must have been full of them; on the following morning, however, only a few could be seen.

26th.—Weathercocks pointing to the east; not the slightest breeze, however, could be felt. Two Dotterels and some Larks were seen during the morning. Large flocks of Larks passed towards sunset in a north-westerly direction.

27th.—During the morning weather was rather foggy, and we had a perfect calm; heard several times the note of Curlews. In the afternoon the wind blew moderately from the S.S.E. when a few Greenfinches were seen coming over from the east.

28th.—The wind turned to the S.S.W. and continued of the same force. The morning was rather foggy. Song-Thrushes arrived during the night.

29th.—A very calm morning, on which only two Larks were noticed; these came over from the N.E. In the afternoon the wind blew moderately from the N.W. Many Skylarks and Titlarks came over from the S.E.

30th.—Wind very light, direction varying from N.W. to S.W. We had a good passage of White Wagtails and some Linnets. Scops Owls were taken at Wied Zembak.

NOVEMBER.

1st.—A light S.W. wind. Passing through Wied Zembak, I met a man who had killed eleven Scops Owls, and I learned from him that he had taken twenty-eight of these birds the day before. The only birds I noticed along the whole valley were three Robins and two Blue Rock-Thrushes.

2nd.—Almost a perfect calm; weathercocks pointing to the S. and S.E. Large flocks of Skylarks began to arrive at about 3 p.m.; they all came in from the east. Very few were taken; the majority must have continued their journey onwards, as the following morning very few were to be seen.

4th.—Wind moderate, blowing from the N.W. The birds observed were some Linnets and Titlarks, seven Chaffinches, and many White Wagtails; many of these were taken in the nets.

5th.—A light S. or S.E. wind. Nothing seen except some Scops Owls.

7th.—Almost calm. Mr. Cachia Zammit shot a Peregrine Falcon, which he sent to me; it now forms part of my collection. I was told that a few Chaffinches were taken.

10th.—Some Larks and Titlarks were brought into the Valletta Market.

11th.—Two Woodcocks at market.

15th.—The Linnets which had gathered in our valleys since

their first arrival began to be taken by means of the bat net, so that there soon appeared a very sensible diminution of these birds.

17th.—Some Plovers and Dotterels were the only game to be seen in the Valletta Market.

19th.—A few Lapwings.

20th.—Plovers and some Woodcocks.

21st.—A fresh wind from the S.S.W.; we had also a little shower. I saw two Firecrests at the railway station at Birchircara.

22nd.—A very light S.W. wind. I saw five Firecrests at St. Antonio Gardens, also some Linnets, two or three Chaffinches, and a good number of Sparrows.

26th.—A thunderstorm of exceptional intensity passed over the island during the early hours of the morning; the rain continued almost all day long. Firecrests appeared in abundance, and apparently they were the only birds noticed.

28th.—The wind blew rather strongly from the N.W. I saw a Firecrest in the Maglio and two Blackcaps in the Argotti Gardens. A Coot, four Quails, and three Plovers were brought into the Valletta Market.

29th.—The wind, which was rather mild, blew from north to east; we had a fall of temperature. Plovers and Woodcocks were taken.

DECEMBER.

Unless otherwise stated, all the birds noted during this month were seen at the Valletta Market.

1st.—It was reported to me that a flock of twenty-seven Cranes were seen coming from the north; they alighted on the rocks in the vicinity of Naxaro. One was shot near the Salina. Woodcocks, Lapwings, and a few Larks at market.

2nd.—Lapwings and Golden Plovers (these in very limited numbers), many Song-Thrushes, two Blackbirds, two Mistle-Thrushes, one Horned and one Little Grebe, many Skylarks, amongst which I found a Short-toed Lark; this is in my opinion a noteworthy occurrence, in fact, I have never before seen a Short-toed Lark so late in the year.

3rd.—Few Plovers, Woodcocks, Larks, and Thrushes; also one Great Plover and one Horned Grebe.

4th.—Few Quails, Woodcocks, Lapwings, and some Golden Plovers.

6th.—Some Quails.

7th.—Some Quails and one Common Heron.

8th.—A light wind blew from the S.W. I went to Melliha with Col. Francia. The only birds I observed were one Hawk, one Lapwing, a few Larks, and about thirty Adriatic Gulls. On our way back I saw some Linnets and three Black Redstarts.

9th.—Some Quails and Larks, also a Shelduck.

10th.—One Mistle-Thrush, two Plovers, twelve Quails, and some Larks.

11th.—I noticed three Black Redstarts at the Argotti Gardens and two Firecrests at the Maglio.

A very light wind from the S.W.; cloudy. At the Valetta Market there were only five Quails, two Song-Thrushes, and some Larks.

12th.—At market five Quails, some Larks, and one male Black Redstart.

13th.—Some Quails and Larks, one Plover, and one Song-Thrush were brought in by the bird-fanciers on St. John's Square.

A light southerly wind. Many Adriatic Gulls were seen passing over towards the north.

Five Song-Thrushes, one Woodcock, and fourteen Golden Plovers were the only birds I saw at the market.

14th.—A few Larks and two Song-Thrushes. I saw one Black Redstart and two Firecrests just outside Floriana.

16th.—One Water-Rail, some Quails, several Skylarks, and two Black Redstarts.

Seven Dotterels, two Golden Plovers, two Quails, and some Larks.

17th.—One Great Plover, two Quails, two Larks, about two dozen Titlarks, and two Black Redstarts.

18th.—Two Song-Thrushes and a few Larks.

19th.—A moderate wind from the S.S.W. We had an abundant passage of Golden Plovers and Dotterels.

20th.—The birds brought into the market were the follow-

ing: Thirty-two Golden Plovers, two Dotterels, two Song-Thrushes, one Moorhen, one Scops Owl, and some Larks.

21st.—Thirty-four Quails, two Dotterels, and a few Larks. I saw a Black Redstart at Hasting's Gardens, Valletta.

22nd.—Two Golden Plovers, two Dotterels, and a few Larks.

23rd.—Two Quails, some Larks, and one Black Redstart.

24th.—Two Quails and five Larks. I saw a Firecrest at the Lower Barracca.

26th.—Three Quails, one Song-Thrush, and some Larks.

I saw a Redstart at Sliema.

A very light wind from the W.N.W. Many Adriatic Gulls and some Southern Herring-Gulls passed very high over Valletta.

27th.—A moderate wind from the N.W. Some Gulls passed, against the wind.

There were some Gulls at the market, amongst which I found one bearing a ring with number 5573.

28th.—Many Adriatic Gulls passed very low over the town.

29th.—I saw a Black Redstart, two Subalpine Warblers, and one Spectacled Warbler in the ditches round Valletta. Another ringed Adriatic Gull (No. 5358) was found among the Gulls exposed for sale at the Valletta Market.

30th.—Almost calm. I saw a Firecrest and two Chiffchaffs at the Lower Barracca.

31st.—An exceptionally large number of Adriatic Gulls, also some Southern Herring Gulls, in Marsamuscetto Harbour.

SOME GERMAN ENCHYTRÆIDS.

BY REV. HILDERIC FRIEND.

SHORTLY before the outbreak of war I was visiting Belgium and Germany, and during a week spent at Neuwied on the Rhine had an opportunity to collect a few of the annelids (Oligochaets) of the district. Most of the species enumerated in this paper were found in the grounds attached to the Schloss, but others came from the woods and fields of Niederbieber, Oberbieber, and the adjoining villages. I confine my remarks to-day to that group of Worms which is known as Enchytræids. They are usually white-blooded, and vary from 3 to about 25 mm. in length. These white Worms are exceedingly numerous in England, and it was my wish to ascertain how far the same species might be found on the Rhine as occur with us in this country.

As the genus *Fridericia* proved to be the most common, it may be well to begin with a description of the genus and then proceed to enumerate the species found. The genus *Fridericia* consists of Worms which average one-half to three-quarters of an inch in length. They have setæ arranged in four bundles on each segment. The number of setæ in each bundle, while almost entirely uniform for the species, varies widely within the genus. Some invariably have two setæ per bundle (bisetose), some have four, some six, and some eight. Usually the number decreases

towards the posterior end, except in the bisetose species, so that a form which has six setæ per set in front of the girdle may have four, three, or two in the tail. The setæ are shorter in the middle of each bundle than at the outside. The girdle is on segment twelve, the spermathecæ are in the fifth segment, and often possess diverticula. There are salivary glands behind the pharynx, and the brain is almost invariably convex behind. The microscope is absolutely necessary for determining the species.

1. *Fridericia michaelsoni*, Bret.

This worm was first described in 1899 by Bretscher (1) from specimens found in Switzerland. Michaelson (2) the following year included it in his *Oligochæta* but added no further reference. Ditlevsen (3) recorded it in 1904 for Denmark, and I have made many allusions to its occurrence in this country. It is one of the most widely distributed species. *F. michaelsoni* frequently reaches $\frac{3}{4}$ inch in length and is stout and active. The setæ usually number six in front, decreasing behind to four, three, or even two. The spermathecæ have a duct which usually exceeds the diameter of the body in length, and there are three or four round diverticula. In the Swiss examples a large gland was found at the external opening of this organ, but Ditlevsen failed to find it in the Danish as Southern did in the Irish forms. In England there is great variation in this respect; sometimes no gland is present, at other times a gland occurs on one side of the body only, while in yet other instances the large gland is found attached to the opening of each spermatheca. The German forms collected by me were possessed of glands. My notes are as follows:

Length 20 mm., segments 65. Dirty yellow-brown. Setæ 6 in front, 5-4 behind. Spermathecæ with long duct, four diverticula, and large gland at the opening. Large male pores on the girdle, which extends over segments 12 and half 13. Dorsal vessel arising very far back, about segment 24 or 25. Brain one and a half times longer than broad, straight or concave in front and convex behind. Sperm-funnels about three times as long as broad, with a distinct but narrow collar. Fully mature

in July. Oberbieber to Braunsberg, and Schloss Grounds, Neuwied on the Rhine.

2. *Fridericia perrieri*, Vejd.

This is a smaller Worm than the last. It was carefully described and illustrated by Vejdovsky (4) in 1877 and again (5) in 1879, and has since been often reported. It occurs in Denmark, Switzerland, Italy, Bohemia, and Great Britain, and has been recorded for Hamburg and elsewhere (3). It is quite as frequently found in this country as *F. michaelsoni*, and has been familiar to me for many years. My record is as under:

Length 8–12 mm., segments 38–50. Setæ usually 6 in front and 3 behind. Spermathecæ with two stalked diverticula, long slender duct and no glands. Dorsal vessel arising in or near segment 18 and pulsing forwards, especially about the sixth segment. Brain projecting in front and convex behind. Salivary glands branched. Sperm-funnels somewhat small, pear-shaped, with a distinct collar and fairly stout duct. Nephridia with duct arising near the septum. Found among beech leaves in the woods towards Braunsberg from Oberbieber.

3. *Fridericia lobifera*, Vejd.

This species also was first described by Dr. Vejdovsky (5), and is marked by the presence of large glands attached to the ampulla of the spermathecæ in the place of diverticula. Length up to $\frac{3}{4}$ inch, with 50–60 segments. The setæ, as in the foregoing cases, number 6 in the front segments and as few as 2 in the tail. The salivary glands branched, dorsal vessel arising about the 20th segment. Brain convex before and behind. Sperm-funnels rather narrow, about three times longer than broad. Schloss Gardens, Neuwied. One specimen had a bifurcated anal extremity.

4. *Fridericia striata*, Levinsen.

First described in 1884 by Levinsen (6), this Worm has been found as far afield as Chili and Uruguay, as well as in Denmark, Switzerland, Germany, and Great Britain. It is stout for its length, and seems to me to be a connecting link between

Fridericia and *Henlea*. My notes agree in most points with the original, and I transcribe them for the light they throw on variation:

Length about 15 mm. when living, but if at rest it may measure no more than 12 mm.; segments 50-60. Transparent and easy to study. Setæ 6 to 8 or 9 in front, 5 and 4 behind, rarely 3. Brain large, convex behind as usual. Salivaries slightly branched. Spermathecæ with short, stout duct, sessile, indefinite glands to the ampulla and two glands at the outer opening. Sperm-funnel not large, say 2-3 times longer than broad, with moderately large long duct and rather large male pore. Large dorsal pores. The dorsal vessel arises about the 18th segment, and the Worm emitted quite an appreciable quantity of white mucus when placed in alcohol.

Habitats: Grounds of the Schloss, Neuwied, and woods around Braunsberg.

5. *Fridericia callosa*, Eisen.

First described by Eisen (7) in 1878 as occurring in Siberia, this Worm has been often found since in various parts of Europe. Like most species of *Fridericia* it is liable to considerable variation. The following are the chief characteristics of the Rhinegau form.

Length about 10 mm.; segments 50. Adult transparent. Setæ 4-6 in front, unequal, decreasing posteriorly to 3 and 2 per set. Dorsal vessel strong, arising about the 20th segment. Three pairs of septals, oval in shape and nearly equal in size. Sperm-funnel small, not greatly exceeding the penial bulb. Duct in the girdle segment long, stout, and much convoluted. The spermathecæ exactly agreed with the type, except that the outer opening is glandular.

One of my specimens was full of encysted Gregarines. Found between Oberbieber and Braunsberg. I have only met with it a few times in England, and in each instance the variations have been considerable.

6. *Fridericia paroniana*, Issel?

An immature specimen of a bisetose species was found among decaying leaves by a streamlet in the woods already mentioned,

which it is impossible to name with certainty, as the spermathecæ were not developed. The available evidence related it more closely to *paroniana* (8) than to any other member of the group. Length of the young Worm 3 mm., segments 30, with yellowish intestine. Setæ 2 per set throughout. Three pairs of septal glands; salivary glands unbranched, extending to the septum $4/5$. First nephridium in $6/7$, duct arising from the middle of the postseptal portion. Large cœlomic corpuscles. Full of parasites, which rendered the creature fragile, and caused it soon to break up under examination. I find its exact facsimile in Derbyshire.

7. *Mesenchytræus setosus*, Mich.

The genus *Mesenchytræus* was founded by Eisen (7) in 1878. The present species is readily distinguished by the enlarged setæ which occur in segments 5, 6, 7. It is a curious fact that one often finds a larger number of setæ, or setæ of a special type, in this region of the body in close proximity to the spermathecæ. The specimen examined was not adult. Length 3-8 mm., segments 45-50. Nephridia with very small anteseptal and large lobed postseptal. Three pairs of septals, and dorsal vessel arising about the sixteenth segment. Michaelsen records it for Hamburg and Calefeld. Southern has found it in Ireland, and my own records included Oberbieber on the Rhine, Cauldwell near Burton-on-Trent, and Solihull, Warwickshire.

8. *Henlea nasuta*, Eisen.

This is one of the best known and most widely distributed Enchytræids. My specimens, found in the Schloss Gardens, Neuwied, were as follows: Length, 10-12 mm., segments about 60, somewhat short and stumpy. Setæ usually 6, about equal in length. Spermathecæ consisting of a pear-shaped ampulla with a duct somewhat longer than it. Brain a little longer than broad, not widening materially behind, with a concave anterior and incised posterior. Girdle extending over segments 12 and half 13. One pair of œsophageal glands, from the posterior of which the dorsal vessel arises. Cœlomic corpuscles large, broad, oval to round, and well defined.

9. *Chamædrilus chlorophyllus*, Friend.

The last of the white Worms which I have to record is of peculiar interest, because it appears up till the present entirely to have escaped the observation of Continental investigators. It may possibly have been found by Bretscher in Switzerland, but if so his description has not been sufficiently detailed to allow of its identification. I first described it (9) in 1913, but had found it on many occasions previously, without being able to trace its connection with any known species or genus. It is widely distributed in this country, and there was every reason to suppose it would be found on the Continent. Found among beech-leaves by the little brook in the woods between Oberbieber and Braunsberg, the Worm showed the following characters: Length, 6-8 mm., stretching to 10, and very slender; segments 35-40. Setæ, 3 per set, sigmoid. Septal glands five pairs, or four pairs with the hindmost pair lobed so as to present the appearance of being double. Large brown chloragogen cells and large irregular oval cœlomic corpuscles. Intestine yellowish. Brain about as long as broad, incised behind. First nephridia behind the girdle, which occupies an advanced position.

This Worm is closely related to *Bryodrilus* and *Buchholzia*, but differs in many important details alike from the one and the other.

I also found a *Tubifex*, *Stylodrilus*, and various species of *Lumbricidæ*, none of which, however, are related to the Enchytræids.

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NOTES AND QUERIES.

MAMMALIA.

Rats Eating the Eggs of Poultry.—I always thought it was a well-known fact that the eggs of poultry or, in fact, any birds, would be taken by Rats if there were any chance of their getting at them; but from the notices in the 'Zoologist' for last month there seems on the part of some of your correspondents some doubt on the subject. Mr. Butterfield speaks of nests in a wood where there is a stream running—I scarcely like to suggest such an idea, but were all or most of the Rats there Water-Rats or Voles? for I cannot otherwise understand how the nests escaped, if the Rats were ordinary Norway Rats. My experience is that the Norway Rat will take, or break and eat, every egg where it has the opportunity. There is another interesting question on this subject: How does a Rat remove an egg without breaking the shell? They must somehow accomplish this feat, for eggs have often been found in the burrows of Rats, and no hole can be discovered in the shell after the most careful examination. From the great number of poultry eggs I have seen in Rats' holes, I feel sure the Rat does destroy, very largely, all kinds of eggs, not sparing those of the Pheasant and Partridge if the nests are placed on banks of hedgerows. I have already made this note too long, or I would have given many instances proving the correctness of the statement that Rats do consume eggs when they have the opportunity.—HENRY LAVER (Colchester).

Rats and Eggs.—Mr. J. Steele Elliott asks whether definite proof can be given of Rats eating eggs. I came across one rather striking instance of this practice. On May 7th, 1907, I was at a small breeding-colony of Black-headed Gulls on a Co. Leitrim lake. The birds were nesting on two little islands. On one of these the nests contained the usual clutches of three eggs, and in a few cases four, but on the other island no nest had more than a single egg. The explanation was there in the shape of piles of empty egg-shells at the entrances to several Rat-holes. The Rats presumably took the eggs daily, or nightly, from every nest. It was in the afternoon that I was on the island. The nests on the other island were very crowded, some even inside a little round cairn.—J. M. McWILLIAM (Craigmore, Bute).

AVES.

Breeding of the Lesser Redpoll in Sussex.—The breeding of the Lesser Redpoll in Sussex has been so seldom recorded that it is of interest to note that a pair nested this year in our orchard at Battle; I found the nest on May 31st, and on examining it on June 2nd found the contents to be six fresh eggs. The nest was built about 13 ft. or 14 ft. from the ground in a fork at the extremity of a bough, one of those which grew straight upwards from the centre of a small apple tree. The structure was a firm and carefully-rounded cup of dry grasses, bents, and fine twigs, mixed with sheep's wool, vegetable and artificial cottons, and a few feathers; on one side there was a large mass of artificial cotton. The cup was well lined with a mixture of sheep's wool, cotton tufts (perhaps of groundsel), fine grasses, and horse-hairs, the whole forming a soft bed for the eggs. The interior measurements of the nest were 47 mm. in diameter and 27 mm. in depth. The hen-bird sat very closely, only leaving the nest at the near approach of the climber. A second pair of Redpolls were seen a few days later in another near locality.—HUGH WHISTLER, M.B.O.U. (Battle).

Late Nesting of Barn-Owls.—I have been observing a nest of Barn-Owls this season. Five eggs were laid about the middle of June. Two were addled; the three young birds were still in the nest on September 4th, but were trying to make a hurried exit when I looked in upon them.—JOSEPH H. SYMES (Coat Martock, Somerset).

Scarcity of Corncrakes in Somerset.—In this neighbourhood the Corncrake appears to have become very scarce. I heard one on May 5th and flushed one from a ditch on August 30th, which appeared to be a young bird; it flew a few yards and then went into another ditch. Corncrakes are not so plentiful here as they were in 1912, when I saw two lots of eggs cut out by the mowing-machine in the same field.—JOSEPH H. SYMES.

Common Scoter in Shropshire and Worcestershire.—Whilst walking alongside the River Severn at 6.30 a.m. (G.T.) on September 7th, I saw a Common Scoter (*Cedemia nigra*). When first observed it was quietly sitting in mid-stream, and allowed me to approach on the river bank right opposite to it, and further, did not attempt to fly until I had twice thrown at it, and then passed down-stream right along the quay-side and through the town of Bewdley. When I first

saw it, it was just opposite where the parishes of Dowles and Bewdley adjoin, which is also the boundary of the two counties. It seems strange to find such an uncommon visitor resting on its migration at such an unlikely spot, but a misty morning and the early hour may have accounted for this.—J. STEELE ELLIOTT.

Spotted Flycatcher Wintering in Oxfordshire.—Whilst staying in Oxfordshire with the Rector of Waterstock, he informed me that a Spotted Flycatcher (*Muscicapa grisola*) spent the whole of last winter in his garden. He saw it catching flies almost every morning on the sill outside his study window (an upstairs room) throughout the winter.—H. W. ROBINSON, M.B.O.U., F.Z.S.Scot. (Caton, Lancaster).

Rooks and Railways.—Has anyone noticed that Rooks have a particular fondness for building as near as possible to a railway line? It struck me that I had noticed this when travelling about, and on the last long journey I made, from Tiverton to London, one morning this spring, I took careful note, and saw many groups of Rooks' nests near the line, and only one or two on trees remote from it. Especially noticeable is the rookery at Reading Station; I also noticed Rooks building in one wet wood in trees so low that the nests did not seem higher than the roofs of the carriages. It is a common sight to see Rooks sitting on telegraph-wires at stations, and at Gunnersbury, S.W. London, last year I saw half a dozen foraging on the line. As the train approached Westbourne Park station on the present occasion I saw my last two Rooks on a wire above a wilderness of rails. From my own experience, then, I should say Rooks particularly liked the neighbourhood of the lines; yet there is, I believe, an idea that they do not, but this may be only when a line is newly constructed near a rookery; the numerous colonies one can see on the above journey are surely not all in process of desertion—it looked quite the other way about.—F. FINN.

Status of Lesser Whitethroat and Stonechat in North-West Yorkshire.—A few days ago I happened to meet Mr. Sam Longbottom, of Bingley, who described the song of a bird which he had heard near Saltaire on or about the first week in July last, and I have no doubt but that it was a Lesser Whitethroat. I had heard earlier in the year that this species had been heard in a nursery in the neighbourhood of Saltaire, where it had probably bred; if so, it is a confirmation of my statement (*ante*, page 197) that this species in this neighbourhood does not affect the thickest foliage for

breeding purposes, but the more open country lanes and gardens. It is, however, a rare breeding species in North-West Yorkshire (see 'Zoologist,' 1914, p. 110.)

Mr. Harry B. Booth writes me under date July 17th informing me that Mr. Greaves, of Hebden Bridge, had written him telling him that a friend, Mr. Sutcliffe, reported having seen a pair of Stonechats near Grassington in Wharfedale, and on going to Grassington he had seen a male and female Stonechat and also a young one, strong on the wing, near Grassington railway. Although the pair may have bred somewhere in the neighbourhood where they were observed, it is by no means certain, since it is a well-known habit for some birds, after having done breeding and the young being well on the wing, to wander away from their breeding-haunts. It would have been more satisfactory to have actually found the nest; this would have been a very interesting record. This species is a very rare breeding species in North-West Yorkshire (see 'Zoologist' for 1901, p. 64).—E. P. BUTTERFIELD (Wilsden).

Bird and Insect Notes from Bolton Woods, Yorks.—I visited Bolton Woods in Wharfedale on the occasion of the Yorkshire Naturalists' Union visit on Saturday, May 20th last, and stayed the week-end at Hougill under Simon Seat, which is higher up the valley, returning on the following Monday. In the stretch of the river between Bolton Woods and Barden Tower I watched with my field-glasses, for an hour at least, a White Wagtail, expecting to find its nest; but in this I was disappointed, as it kept close to the river, chiefly on the left bank, and in sight all the time, and was busy catching insects. Otherwise I saw nothing else very noteworthy. The usual characteristic birds were there in their usual numbers, viz. Common Sandpiper, Grey Wagtail, and Dipper, of the last of which I saw two nests—one with young and another with eggs. I did not see the Greater Spotted Woodpecker nor the Hawfinch. The head gardener to the Duke of Devonshire informed me that this species had not been quite as common as in some previous years—a remark quite as applicable to this district (Airedale). It is, however, interesting to again record the nesting of the Woodcock in Bolton Woods. The Green Hairstreak Butterfly (*Thecla rubi*) was quite common, nay, it can be said to have actually swarmed, in the haunts where my brother and I found it thirty years ago, and the somewhat local Bee *Andrena cineraria* had its nests in abundance in some drift mounds near Hougill.—E. P. BUTTERFIELD.

ARACHNIDA.

Same Species of Tick Infesting Polecat and Otter.—In an article in 'The Field' of July 29th, 1916, on the Polecat by Miss Frances Pitt, I was interested to read that the tick found upon these animals was the species *Ixodes hexagonus*, for curiously enough the same species is sometimes found upon the Otter. On August 6th, 1910, I took females of this species from the head of a dog Otter killed by hounds near Lancaster, and although I have handled a fair number of freshly-killed Otters at different times, this is the only one upon which I noticed any parasites. As I am informed by Miss Pitt that all the ticks found upon the Polecats were females, the same being the case with all those taken from the Otter, it would be interesting to learn where the males of this particular species are to be found.—H. W. ROBINSON, M.B.O.U., F.Z.S.Scot. (Caton, Lancaster).

ECHINOIDEA.

A Mode of Feeding in a Sea-Urchin.—On p. 98 of the present volume of 'The Zoologist' it was pointed out that a captive Purple-tipped Sea-Urchin had been observed to wrap a long *Sabella* around its body in such a way that the echinoderm was able to feed easily upon its inconveniently long victim. During a vacation dredging expedition at Walton-on-the-Naze (Essex) on June 29th I obtained a number of fine examples of this species of Sea-Urchin. One of these animals, which was about 40 mm. in diameter (including the spines), carried a *Sabella* wrapped tightly around its body. The worm lay at right angles to the equator of the echinoderm, and one end of the tube of the *Sabella* was found actually within the grasp of the Sea-Urchin's teeth when the echinoid was lifted out of the dredge. This observation upon a free Sea-Urchin affords welcome confirmation of those previously made only upon captive individuals.—H. N. MILLIGAN.

Rate of Growth of *Echinus miliaris*.—A Purple-tipped Sea-Urchin (*Echinus miliaris*) lived for 436 days in an aquarium. When the animal was captured its long diameter (excluding the spines) was 27 mm., and at the time of its death this diameter had increased to 30 mm. The growth in diameter of the Sea-Urchin had therefore been at the rate of 1 mm. in every 145.3 days. Of course, the rate of growth of a marine animal in captivity may be quite different from that of the same animal in the sea, but so little is known upon the subject that any facts which bear upon it will be useful.—H. N. MILLIGAN.

NOTICES OF NEW BOOKS.

The Birds of Britain, their Distribution and Habits. By A. H. EVANS, M.A., F.Z.S., M.B.O.U. Cambridge: University Press. 1916. 4s. net.

Mr. EVANS's contribution to the already enormous series of British bird books is of a handy size and attractively got up; it is also plainly written as a whole, with but few technicalities and no evolutionary or sentimental padding. An introductory chapter gives some information about the class as a whole, and is followed by a list of the orders and families, while, after the general body of British birds has been treated of, a nominal list at the end is devoted to occasional visitors.

The book is designed for the use of schools, and for beginners generally; and it would have been better, in view of this, if a little more attention had been given to the descriptions, which are often very insufficient. Not only are the characters given often those of but one style of plumage when the species exhibits, according to age or season, more than one, but indications of size are rarely given, and these, we know from much teaching experience, are particularly needed by learners. The description of the Raven as a "fine glossy black bird" does not differentiate it from the Carrion Crow, and the description of the female Eider as "plain brown and buff" would suit half-a-dozen of our Ducks of that sex. Sometimes there are positive mistakes, as where the young Starling is credited with showing yellow on the bill, and the Mallard with a marked sexual difference in the colouring of the speculum, said to be purple with a white border in the drake and green in the duck. The illustrations, mostly from photographs, are numerous, but not always clear or well selected; it would have been better, we think, to have figured the Razor-bill rather than the Great Auk, and the Sparrow-Hawk than the Greenland Falcon. Here also there are two grave errors: the illustration purporting to show the Spotted Flycatcher represents the Pied species, and is upside down, and the bird figured as the Common Crane represents, not that bird, but a pied hybrid between the Canadian and Manchurian Cranes which shares the Common Cranes' paddock at the Zoo, where the photo was taken. The distribution of birds outside Britain is not always correctly given, the winter range being sometimes ignored, while it is even misleadingly represented in the case of the Wigeon, said to visit in winter "North America and other countries," this bird being, as a matter of fact, only a straggler in the New World.

